Water Conservation Plan

Small Community Water System: Well Hill Coop, EPA ID# 0053010

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The Well Hill Coop water system is submitting this water conservation plan, demonstrating how the water system proposes to comply with the provisions of Env-Wq 2101.06. Activities outlined in this water conservation plan will be completed by water system personnel under the supervision of the certified water system operator.

Reason for New Source

In February, 2011, the Well Hill Coop water system ran out of water as BRW#2 ran dry and the atmospheric storage was depleted. It was decided that the system would seek emergency approval of BRW#4. The pump test and water quality sampling was completed and the well was approved. However, it was determined that BRW#4 only yielded 1.25 gallons per minute.

As the replacement well, didn't yield much additional supply it was determined that BRW#2 should remain online. The pump-protector was reconfigured to allow the well sufficient recovery upon drawing the static level down to the height of the pump.

System Data

The Well Hill Coop small community water system has at least 24 service connections. The number of occupied mobile homes is 14. There are several lots that are empty and at least three units that are unoccupied. The water system has population of 35, calculated at 2.5 residents per mobile home.

Drilling records indicate BRW# 1 yields nine gallons per minute, BRW#2 yields ten gallons per minute and BRW#3 yields five gallons per minute. These records are several decades old and current yields have significantly diminished but haven't been quantified.

The average daily water use is calculated to be 5,250 gallons, at 150 gallons per bedroom.

The greatest factor in any observable seasonal trend is the high frequency of freeze-related leaks under the mobile homes and in unoccupied units. The Coop has and will continue to take numerous measures to minimize the occurrence of leaks, such as regular leak inspection, the insulation of the

trailer skirting, the application of heat tape to supply lines under the mobile homes and the distribution of outreach materials.

Water Meters

Source meters are installed on each of the previously approved sources and Cushing & Sons has been contracted to install a meter on BRW#4, to be completed by July 31, 2011. The existing meters have been in place since the park became a coop, and presumably since the installation of the wells in the early 1970s. There is no record of the meters being tested or calibrated. The meters make, model, size, and flow ranges are unknown.

The source meters will be read and recorded on a monthly basis. At present, the coop has no resources allocated for the testing of the meters.

Well Hill Coop has no service meters in place. All connections are unmetered.

The Coop doesn't have the resources to complete a water audit or water loss calculations. Hence, the system will perform leak detection to comply with Env-Wq 2101.06(b) rather than meter reading and accounting.

The park resident, assuming the role of maintenance, is responsible for performing the seasonal monthly in-house leak detection.

Leak detection

Well Hill Coop had a leak detection survey performed in March, 2011, by Granite State Rural Water Association (GSRWA). The survey was conducted throughout the entire park and no leaks were detected at that time. Since the snowmelt the park has conducted numerous leak detection inspections utilizing its own personnel.

A comprehensive leak detection survey will be conducted every two years, utilizing the services of GSRWA. In-house visual leak detection of the service connections, underneath the mobile homes and of the water level in the atmospheric storage tank will be conducted on a monthly basis, during the fall and winter.

There are no existing records or plans of the distribution system. It is assumed to be of PVC and nylon construction, installed in the early 1970s.

System pressure varies from residence to residence as the system is gravity fed (20 to 40 psi). The abundance of iron and manganese contributes to a loss of pressure requiring frequent cleaning at the individual service connections. The system is gravity fed from the storage tank located above grade of the park. There are no "bleeders" used within the system.

Detected leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09.

Leak detection will be conducted in accordance with procedures and protocols described in Chapter 3 and 4 of the "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999.

Consumption Management

Water consumption is not metered or billed.

The educational materials "Water Efficiency Practices for Domestic Indoor Water Use", "Water Efficiency Practices for Outdoor Water Use" and "An Introduction to Water Use Management

and Water Efficiency Practices" located at:

http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb-26-1.pdf

http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb-26-2.pdf

http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/documents/dwgb-26-3.pdf

These materials will be distributed annually and to all new Coop members by the park resident assuming the role of maintenance.

Water Use Restrictions

The water system implements water restrictions as needed, e.g. when leaks have consumed the storage or when one or more water sources fail. Restrictions typically specify when water can be used or what activities it may be used for.

The park board of directors is responsible for enforcing restrictions and disseminating the information and restriction specifics.

NH DES Water Conservation Report

The water system will submit a form supplied by DES once every three years documenting how compliance with the requirements of Env-Wq 2101 is being achieved